



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

CCR

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,219	08/01/2003	Toshiya Ishii	NECE 20.554	3687
26304	7590	10/18/2004	EXAMINER	
KATTEN MUCHIN ZAVIS ROSENMAN 575 MADISON AVENUE NEW YORK, NY 10022-2585			NGUYEN, THANH NHAN P	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/633,219	ISHII ET AL.	
	Examiner	Art Unit	
	(Nancy) Thanh-Nhan P Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 3,4,7-11 and 13-18 is/are allowed.
- 6) Claim(s) 1,2,5,6,12,19 and 20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 01 August 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION**Claim Objections**

Claims 13-14 are objected to because of the lack of antecedent basis for "second alignment-controller", and second alignment-controller had not previous been mentioned in claim 1. It has appeared that the "second alignment-controller" depends upon claim 2. Therefore, for the examination purpose, claim 13 would be interpreted as: The liquid crystal display device as set forth in *claim 2*, wherein said pixel electrode is formed with at least one opening area for dividing said pixel electrode into a plurality of sections in said first and second areas, said second alignment-controller is comprised of a second opening area of said substrate where said opposing electrode does not exist, said opposing electrode is formed with two second opening areas each in facing relation to said pixel electrode in said first area and said pixel electrode in said second area.

Claim 14 would be interpreted as: The liquid crystal display device as set forth in *claim 2*, wherein said pixel electrode is formed with at least one opening area for dividing at least a part of said pixel electrode into a plurality of sections in said first and second areas, said second alignment-controller is comprised of a second opening area of said second substrate where said opposing electrode does not exist, said opposing electrode is formed with a plurality of second opening areas in facing relation to each of said sections and/or a non-divided portion of said pixel electrode.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, and 5-6 are rejected under 35 U.S.C 102(b) as being anticipated by Kubo et al U.S. Patent Application Publication No. 2001/0020991.

Referring to claim 1, Kubo et al discloses a liquid crystal display device comprising: a first substrate (70) including a first area (120R) in which an incident light is reflected and a second area (120T) through which a light passes, and further including a pixel electrode (69 and 68) covering said first and second areas therewith; a second substrate (160) including at least an opposing electrode (166); a liquid crystal layer (140) sandwiched between said first and second substrates and including liquid crystal molecules each having a major axis aligned perpendicularly to said first and second substrates when no electric field is applied thereto; and a first alignment-controller [vertical alignment, not shown, see page 15, paragraph 0283] for controlling alignment of said liquid crystal molecules, said first alignment-controller being arranged at a boundary of said first and second areas or in the vicinity of said boundary, [see figure 25].

Referring to claim 2, Kubo et al discloses a second alignment-controller [vertical alignment, not shown, see page 15, paragraph 0283] for controlling alignment of said liquid crystal molecules, said second alignment-controller being formed in said second substrate in facing relation to said first and second areas.

Referring to claim 5, Kubo et al discloses a cell gap above said first area (dr) and a cell gap above said second area (dt) are different from each other, [see figure 25].

Referring to claim 6, Kubo et al discloses the first substrate (70) has a level-different portion between said first and second areas, [see figure 25].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, and 19-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo et al in view of Park U.S. Patent No. 6,784,963.

Referring to claim 12, Kubo et al lacks of disclosing the second alignment-controller is comprised of a second opening area of said second substrate where said opposing electrode does not exist.

Park discloses the second alignment-controller (54) is comprised of a second opening area (53a) of said second substrate (51) where said opposing electrode (53) does not exist, [see figure 5].

Referring to claim 19, Kubo et al lacks of disclosing wherein said second opening area is comprised of a cross slit.

Park also discloses second opening area is comprised of a cross slit, [see column 4, lines 32-33].

Referring to claim 20, Kubo et al lacks of disclosing wherein a center of said second opening area is in alignment with a center of said pixel electrode.

Further, Park discloses the center of second opening area is in alignment with a center of pixel electrode, [see figure 5].

All of the above listed features are described in Park's disclosure as being for the benefit of improving viewing angle of the liquid crystal display device. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have an opening area on the alignment-controller for the benefit of improving viewing angle of the liquid crystal display device.

Allowable Subject Matter

Claims 3-4, 7-11, 13-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of prior art taught or disclosed in transflective liquid crystal display device, the alignment-controller being arranged at a boundary of reflective area and transmissive area or in the vicinity of the boundary comprised of an opening area of first substrate where pixel electrode does not exist, or comprised of a projection formed on pixel electrode on first substrate.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kubo et al U.S. Patent Application Publication No. 2001/0020991 discloses a transflective liquid crystal display device with vertical alignments formed on the surfaces of the substrates.

Park U.S. Patent No. 6,784,963 discloses the opening area on the second alignment-controller where the opposing electrode does not exist.

Art Unit: 2871

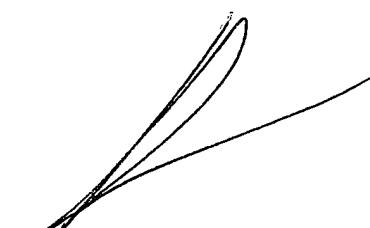
Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen
Examiner
Art Unit 2871

TN



KENNETH PARKER
PRIMARY EXAMINER